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IN THE
Supreme Court of the United States

No. 441, October Term, 1938.

THE ELECTRIC STORAGE BATTERY COMPANY,
Petitioner,

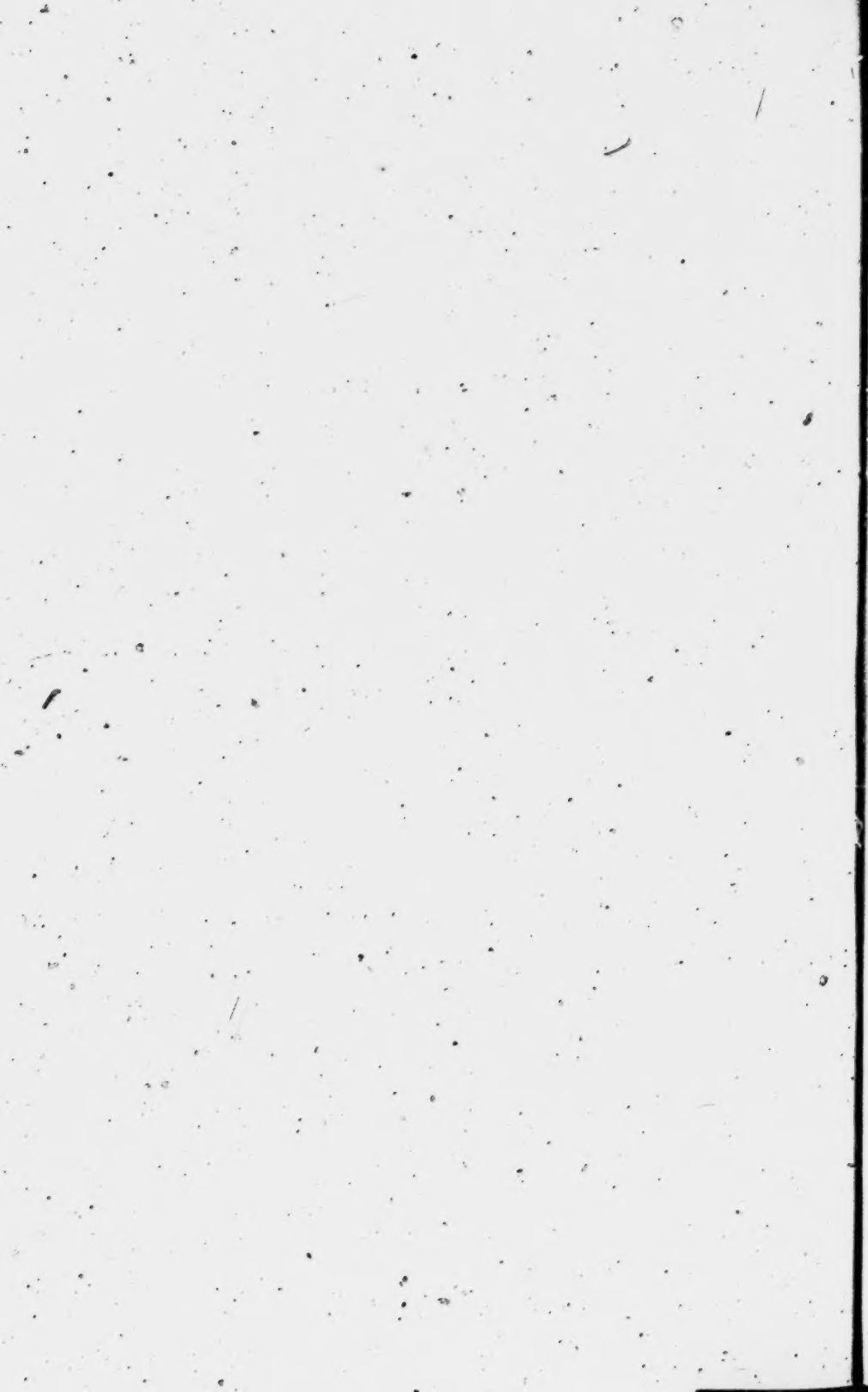
vs.

GENZO SHIMADZU and NORTHEASTERN ENGINEERING
CORPORATION,
Respondents.

Petition for Correction of Opinion and Corresponding Modification of Orders and for Rehearing on One of the Issues Together with Supporting Affidavits Therefor.

EDMUND B. WHITCOMB,
GEO. WHITEFIELD BETTS, JR.,
JOSEPH W. HENDERSON,
Counsel for Respondents.

GEORGE H. SOUTHER,
GEORGE YAMAOKA,
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INDEX

	Page
I. No Public Use Whatever is Shown in 1921 of the Important Element of "Blowing the Powder Produced Out of the Vessel by the Air Blast" as Specified in Claim 2 of the 1,584,150 Patent	3
II. The Product and Other Claims of the 1,584,150 Patent Not in Litigation Before This Court Cannot Properly Be Invalidated by the Alleged Prior Use—Lower Courts Concurrently Held That the Evidence Did Not Prove That Petitioner's Product Contained the Elements Recited in the Product Claims	5
III. Only Claims 10 and 11 of the 1,896,020 Patent Are in Litigation; Decision of the Court Should Not Invalidate Claims 1 to 9, Each Inclusive—Opinion Should be Corrected to Avoid Any Possible Misunderstanding.....	7
IV. Claim 2 as Well as Claims 1, 3, 9, 11 and 12 of 1,584,150 Patent Clearly Entitled to the Effective Filing Date as of the 1,584,149 Patent—Hence, Alleged Bar of Two Years Public Use Cannot Apply to These Claims—Claim 2 Specifically Applied to the Disclosure of the 1,584,149 Patent	7

I N D E X

	Page
V. Claims 10 and 11 of the 1,896,020 Patent Clearly Entitled to the Filing Date of the 1,584,149 Patent. Claim 10 Applied to PX-13, a Drawing Admitted in Evidence by the Courts Below as Representative of the Apparatus Disclosed in the 1,584,149 Patent	15
VI. A Consideration of All the Circumstances Reveals That Petitioner Did Not Plead the Defense of Public Use Based on the 1921-1923 Hardinge Mill Activities; This Court Apparently Overlooked the Total Inadequacy of Petitioner's Proof in Fact, and Under the Authorities to Establish a Public Use, Especially Failing to Note the Clear Line of Distinction Established by the Record Between Petitioner's Experimental and Development Work, Which Was Maintained a Secret, and the Later Operation of Petitioner's Plant	19

APPENDIX

Affidavit of Clarence J. Treston	47-52
Affidavit of John J. Deegan	53-54

AUTHORITIES CITED

Page

Agawan Co. v. Jordan, 7 Wall. 583, 74 U. S. 583.....	22
Austin Machinery Co. v. Buckeye Traction Ditcher Co., 13 F. (2d) 697, 698.....	42
Bates v. Coe, 98 U. S. 31, 37, 45-47.....	22
Beadle v. Bennett, 122 U. S. 71, 76, 77.....	41
Chapman et al. v. Wintroath, 252 U. S. 126, 137.....	8
Cleveland Trust Co. v. Schriber-Schroth Co., 92 F. (2d) 330, 336, 305 U. S. 47.....	42
Commission v. Havmeyer, 296 U. S. 506, 509.....	29
Eclipse Machine Co. v. Harley Davidson Motor Co., 252 F. 805, 811	42
Edison v. Allis-Chalmers Co. et al., 191 Fed. 837, 843	12
Eibel Process Co. v. Minneapolis & Ontario Paper Co., 261 U. S. 45.....	28
Elizabeth v. Pavement Co., 97 U. S. 126.....	41, 42, 43
General Electric Co. v. Independent Lamp & Wire Co., Inc., 267 F. 824, 836.....	10
Godfrey v. Eames, 1 Wallace 317.....	9
Harmon v. Struthers, 57 F. 637, 641.....	42
Hayes-Young Tie Plate Co. v. St. Louis Transit Co., 137 F. 80, 82	11
Helvering v. Gowran, 302 U. S. 238, 245.....	29
Helvering v. Pfeiffer, 302 U. S. 247, 252, 253.....	29
Kearner Incinerator Co. v. Townsend Estates, 27 F. (2d) 599, 604	42

AUTHORITIES CITED

	Page
Langnes v. Green, 282 U. S. 531, 583.....	29
Los Angeles Lime Co. v. Nye, 270 F. 155, 162.....	42
Manning v. Cape Isinglass & Glue Co., 108 U. S. 462, 465	42
Novadel Process Corp. v. J. P. Meyer & Co., 35 F. (2d) 697	10
Pacific Cable Ry. Co. v. Butte City St. Ry. Co., 55 F. 760, 765	42
Reo Motor Car Co. v. Gear Grinding Machine Co., 42 F. (2d) 965, 968	42
Root v. Third Ave. Railroad Co., 146 U. S. 210, 225..	42
Singer v. Braunsdorf, 7 Blatchf, 521, Fed. Case No. 12,897	9
Smith v. Goodyear Dental Vulcanite Company et al., 93 U. S. 486, 501	9
Smith and Gregg Mfg. Co. v. Sprague, 123 U. S. 249, 265	41
Stelos Co. v. Hosiery Motor-Mend Corp., 295 U. S. 237	29
Wendell v. American Laundry Machine Co., 239 F. 555, 558, 248 F. 698.....	43
Westinghouse Electric Manufacturing Co. v. Sara- nac Lake Electric L. Co., 108 F. 221, 228.....	42

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**Petition for Correction of Opinion and Corresponding
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Supporting Affidavits Therefor.**

**To the Honorable, the Chief Justice and the Associate
Justices of the Supreme Court of the United States:**

The respondents above named, Genzo Shimadzu and Northeastern Engineering Corporation, respectfully present this petition for a rehearing of the above entitled cause and request this Honorable Court to reconsider its action on April 17, 1939, in reversing the decree of the United States Circuit Court of Appeals for the Third Circuit and in invalidating the United States Letters Patent Nos. 1,584,450 and 1,896,020 and in remanding the cause to the United States District Court for the Eastern

District of Pennsylvania with directions to dismiss the bill as to United States Letters Patent Nos. 1,584,150 and 1,896,020, and to proceed, in the light of the invalidity of said patents, to determine whether United States Letters Patent No. 1,584,149 is valid and infringed.

Out of deference to the practice of this Court, this petition for rehearing of the above entitled case (Opinion of Mr. Justice Roberts of April 17, 1939), will not undertake a reargument of matters already fully developed in the briefs and on the argument to the Court, except that counsel have deemed it advisable to discuss certain features of the doctrine of public use, particularly presenting certain factual considerations which, it is felt, the Court may not have had fully in mind. Aside from the matter of public use, the petition for rehearing discloses certain misapprehensions of the facts established by the Record (points I to V herein), certain errors as to the scope of the issues before the Court (points II and III), and certain matters as to which it is believed the Court overlooked controlling cases in its decision (points IV and V). Counsel for respondents urge that the rights in the respective patents should not be prejudiced on the remand to the District Court by inadvertent errors as to the facts and scope of the issues involved which are believed to have crept into the Opinion. However, counsel for respondents are clear that the matters set forth in this petition warrant vacating the order of reversal herein and substituting an order affirming the decrees below or modifying the same as required by the facts.

In support of their petition, respondents respectfully present the following reasons:

I. No Public Use Whatever Is Shown in 1921 of the Important Element of "Blowing the Powder Produced Out of the Vessel by the Air Blast" as Specified in Claim 2 of the 1,584,150 Patent.

This Honorable Court fell into error, it is believed, in generalizing as to the invalidity of the claims of patent 1,584,150 without differentiating between respective claims, particularly without considering whether all the claims are equally satisfied by petitioner's alleged activities for more than two years before July 14, 1923, the filing date of said patent.

Thus, claim 2 includes as a separate step "causing such blast to **blow the powder produced out of the vessel**" (emphasis ours)*. The record does not warrant any holding that petitioner performed a process including the step of blowing the powder out of the vessel more than two years before July 14, 1923.

Petitioner's witness Smith stated (B. I, 466):

"The air is drawn through the mills in the direction counter to the flow of the lead; that is, the air entered the mill at the trunnion where the Gray Oxide passed out, and left the mill at the trunnion where the lead balls entered."

*That this feature of the process is important is clearly evidenced by petitioner's own statements made through its attorney in the file-wrapper during the prosecution of the Hall patent 1,888,823 (PX-18). Thus, in paper No. 12, amendment filed January 20, 1927, page 1, it is stated: "As to claim 5, the Examiner is probably correct in stating that the dust arresters and the dust caught in them are incidental, but the fact that the element 6 called a hopper is a cyclone dust collector in which the bulk of the product, which is the fine part, is blown appears to have been overlooked. Only the coarse part gradually works over the exit end of the mill. . . . The dust blown into and whirling about in 6 falls most of it into the part above 7, which is recovered as the product, and about 10 per cent into the part above 8, which is returned to the mill along with the coarse pieces. . . . as a matter of fact, the fine material, which is the product, is blown out of the mill and the larger pieces roll out of the mill and are returned."

A maximum of thirty-three cubic feet of air per minute was used (DX-43) as contrasted with the three hundred cubic feet per minute subsequently found necessary by petitioner for practical application. Such a gentle flow of air could not possibly blow out heavy lead oxide powders. The air was met by the flow of material moving toward the discharge end as well as the incoming lead balls at the feed end of the drum. This arrangement was continued until at least October, 1923; not only past the two-year critical period but even subsequent to Shimadzu's filing date of July, 1923.

Smith also stated (R. I, 467):

"In October, 1923, the old Hardinge mill, originally installed at 19th Street, was removed to Crescentville and tests were conducted upon it with the direction of the air flow reversed, so as to coincide with the flow of the product."

"Up to this time, air current through the mills has been in the counter flow direction, as in the original Hardinge mill."

Larger balls were also tried at this time and the witness continued (R. I, 467):

"Both of these experiments proved successful, so that the eight mills of the larger plant were all arranged to use two-inch balls and to have the air flow in the direction of the product."

Some "dust" may have possibly circulated out with the air passing in the wrong direction and "simply turned loose into the outside air" and wasted. According to petitioner's own witness, no successful means was used to collect this "dust" until December, 1922, or

later, a year and a half too late to constitute a public use against the 1,584,150 patent. Until 1922 all the dust passing out by the air escaped in the building or outside atmosphere and was a total waste. Smith stated (R. I, 461) that petitioner decided to install a dust collector in 1922, and that a Sturtevant dust collector was ordered. December, 1922. Hall stated that his "home made" collectors were not satisfactory (R. II, 1024). Hall's oral statement, unsupported by the record, that he used collectors in 1921 is entitled to no credence. The record is entirely lacking in any proof that the powder was moved out of the Hardinge mill by the air prior to at least October, 1923. Therefore claim 2 of patent 1,584,150 could not possibly be invalidated by any two-year public use when, as here, the alleged antecedent process did not conform with or satisfy the claim in question.

Hence, it is respectfully but urgently submitted that this Court's opinion of April 17, 1939, should be modified to affirm unqualifiedly the concurrent holdings of the Courts below that there is no public use bar against claim 2 of the 1,584,150 patent and that claim 2 is valid.

II. The Product and Other Claims of the 1,584,150 Patent Not in Litigation Before This Court Cannot Properly Be Invalidated by the Alleged Prior Use—Lower Courts Concurrently Held That the Evidence Did Not Prove That Petitioner's Product Contained the Elements Recited in the Product Claims.

This Honorable Court fell into error, it is believed, in generalizing as to the validity of the Shimadzu patents without differentiating between the claims now in

suit and the claims not now in suit. On page 11 of this Court's opinion the statement is made:

"This use, begun more than two years before Shimadzu applied for patents 1,584,150 and 1,896,020, invalidated them."

This statement would appear to hold, for example, that patent No. 1,584,150 is invalid in its entirety.

As appears from page 1 of this Court's opinion, only claims 1 to 4, 6 and 8 to 13 of patent No. 1,584,150 are now involved in the litigation. Of the remaining claims, some were never involved in the litigation and others, the product claims (held valid although not infringed) **were not before this Court**. The Courts below did not hold or intimate that the claims not now before this Court were invalid. These claims cover different features of Shimadzu's invention. There is no foundation upon which to base a holding that any or all of said claims are satisfied by any alleged public use of the subject matter thereof more than two years before Shimadzu's filing date. In fact, the concurrent findings of the Courts below are that the product made by petitioner's Hardinge mill did not satisfy the **product claims**.

Hence the Court's decision should be corrected, it is submitted, to exclude from the scope of its holding of invalidity those claims not now involved in the litigation.

III. Only Claims 10 and 11 of the 1,896,020 Patent Are in Litigation; Decision of the Court Should Not Invalidate, Claims 1 to 9, Each Inclusive—Opinion Should Be Corrected to Avoid Any Possible Misunderstanding.

This Honorable Court fell into error, it is believed, in appearing to hold, in the sentence above quoted in Point II, that patent No. 1,896,020 is invalid in its entirety, whereas only claims 10 and 11 were ever involved in this litigation. There is no evidence in the record warranting a conclusion that any of claims 1 to 9 inclusive of this patent are subject to any bar of two years public use, and it would therefore seem clear that the decision should be corrected to preclude an interpretation thereof that claims not in litigation are subject to the Court's ruling on the bar of two years public use.

IV. Claim 2 as Well as Claims 1, 3, 9, 11 and 12 of 1,584,150 Patent Clearly Entitled to the Effective Filing Date as of the 1,584,149 Patent—Hence Alleged Bar of Two Years Public Use Cannot Apply to These Claims—Claim 2 Specifically Applied to the Disclosure of the 1,584,149 Patent.

This Honorable Court fell into error, it is believed, in ruling that patent No. 1,584,150 is invalid upon the ground of public use more than two years before the 1923 filing date thereof without giving to Shimadzu as to common subject matter the benefit of his earlier copending application (1,584,149) which clearly discloses the subject matter of certain of the claims thereof, and constitutes a constructive reduction to practice of such claims, thereby eliminating the alleged public use defense

by giving said claims the filing date of the 1,584,149 patent application.

The application which matured into patent No. 1,584,150 was copending with the application for patent No. 1,584,149, filed January 30, 1922, as to which "the defense of prior public use is not made out" (Opinion p. 11). Claim 2 and others of patent No. 1,584,150, for example, find complete and legally adequate disclosure in Shimadzu's United States application as filed on January 30, 1922. Therefore, under the accepted rule of this Court, Shimadzu for these claims is entitled to said filing date of January 30, 1922, as his effective date from which to reckon the two-year period in determining whether or not the bar of public use exists.

This Court in **Chapman et al. v. Wintroath**, 252 U. S. 126, 137, said:

"To this we must add that not only have later or divisional applications not been dealt with in a hostile spirit by the courts, but, on the contrary, designed as they are to secure the patent to the first discoverer, they have been favored to the extent that where an invention clearly disclosed in an application, as in this case, is not claimed therein but is subsequently claimed in another application, the original will be deemed a constructive reduction of the invention to practice and the later one will be given the filing date of the earlier, with all of its priority of right. *Smith & Griggs Manufacturing Co. v. Sprague*, 123 U. S. 249, 250; *Von Recklinghausen v. Dempster*, 34 App. D. C. 474, 476, 477."

Likewise, in **Smith v. Goodyear Dental Vulcanite Company et al.**, 93 U. S. 486, 501, this Court treated a later (1864) application as "continuous" with respect to an earlier (1855) application to avoid an alleged public use by others than the patentee himself which occurred in 1859 or more than two years prior to the second application but not more than two years prior to the first application.

It is the firmly settled law that as between co-pending applications a claim in the later-filed case directed to subject matter disclosed in the earlier-filed case is entitled to the benefit of the filing date of the earlier-filed case as against allegations of a two-year public use bar (**Godfrey v. Eames**, 1 Wallace 317.) In **Singer v. Braunsdorf**, 7 Blatchf, 521, Fed. Case No. 12,897, the validity of the claims first presented in the 1853 application over a charge of more than two years public use depended upon the disclosure of the subject matter thereof in an application of 1850. In sustaining the patent maturing from the 1853 application, Judge Blatchford said:

"The inventions claimed in his patent of 1856 having been shown in his model and drawings filed in December, 1850, he is, in view of the settled law in regard to applications for patents, and in regard to reissues of patents, to be regarded as having applied in December, 1850, for a patent for everything found in such model and drawings, for which he could then have obtained a valid patent."

This rule has been uniformly applied whether the second filed application is a division or a continuation in part

of that which is disclosed in the earlier application, any claim in the later case which is directed to subject matter common to the two being given the benefit of the filing date of the earlier case. In **Novadel Process Corp. v. J. P. Meyer & Co.**, 35 F. (2d) 697, C. C. A. 2, the Court said:

"It was a continuing application, and, in so far as the subject-matter is common to both, it is entitled to priority if the plaintiff desires to assert it as of the filing date of 1916."

To the same effect see **General Electric Co. v. Independent Lamp & Wire Co., Inc.**, 267 F. 824, 836, wherein the Court, speaking per Judge Morris, said:

"The patents and publications hereinbefore discussed are the only ones of which the effective date is prior to July 2, 1906, the date on which Coolidge filed his first United States patent application for working tungsten. As hereinbefore stated the application on which the patent in suit issued was in part a continuation of the 1906 application. In so far as the earlier application discloses any invention contained in the patent in issue, the patentee is entitled to the benefit of the filing date of the earlier application. **Badische Anilin & Soda Fabrik v. Klipstein** (C. C.) 125 Fed. 543; **Victor Talking Machine Cases** (C. C.) 140 Fed. 860; *Id.*, 145 Fed. 350, 76 C. C. A. 180; *Id.* (C. C.) 177 Fed. 248. This was recognized by the Patent Office."

In Hayes-Young Tie Plate Co. v. St. Louis Transit Co., 137 F. 80, 82, C. C. A., 8, the Court said:

"In cases in which the first application has not been abandoned, subsequent applications and amendments constitute a continuance of the original proceeding, and the two years' public use or sale which may avoid the patent must be reckoned from the presentation of the first application, *and not from the filing of subsequent applications or amendments. U. S. v. American Bell Telephone Co., 167 U. S. 224, 17 Sup. Ct. 809, 42 L. Ed. 144; Colgate v. Western Union Tel. Co., Fed. Cas. No. 2,995; Miehle v. Read, 96 O. G. 426; Thomson-Houston Electric Co. v. Winchester Avenue R. Co. (C. C.) 71 Fed. 192, 73 O. G. 2155; Godfrey v. Eames, 1 Wall. 317, 17 L. Ed. 684; Smith v. Goodyear Dental Vulcanite Co., 93 U. S. 486, 23 L. Ed. 952; Cain v. Park, 14 App. D. C. 42, 86 O. G. 797, 798; Ex parte Stewart, 4 O. G. 665; Stirling Co. v. St. Louis Brewing Ass'n (C. C.) 79 Fed. 80; Dedrick v. Fox (C. C.) 56 Fed. 714, 717; Ligowski Clay-Pigeon Co. v. American Clay-Bird Co. (C. C.) 34 Fed. 328, 333."

The language in a second application need not be identical with that of a first filed application. Even though changes may be made in a description, if the subject matter of a second application is clearly supported by the disclosure of the first application, the second is entitled to the date of the first irrespective of changes.

*Of course, this would be just as true under R. S. §4886 or R. S. §4887.

Thus, in **Edison v. Allis-Chalmers Co. et al.**, 191 Fed. 837, 843, in a carefully considered case the Court stated:

“Defendant contends that the divisional application contains subject-matter not disclosed in the original application, and therefore the former cannot be antedated. The descriptive matter, however, in the application upon which the patent was granted, is substantially the same as that contained in the earlier. True, a change was made in the description, but such change in my opinion is not of material importance.”

The Court held that the divisional application for the **apparatus** patent was entitled to the filing date of the earlier **process** patent as against an alleged defense of prior public use.

The 1,584,149 patent describes not only the solid drum with the air tube leading there into as illustrated in PX-13, but also in lines 81 to 87 (R. III, p. 1) the other modification in which the drum is perforated with a large number of holes, “whence the powdered product may be blown out to be collected in any suitable chamber.” It is also important to note that Shimadzu claimed in the 1,584,149 patent application, as filed, a process involving the specific arrangement of a drum perforated with holes described in detail in the 1,584,150 patent application, (see claim 9 of the 1,584,149 patent application as filed PX-2). From this it is clear that under the wording of either R. S. §4886 or R. S. §4887 Shimadzu unquestionably had made an oath and filed “application” for patent in the United States as of January 30, 1922, for not only the subject matter shown and described in the 1,584,149 pat-

ent, but the modification disclosed and claimed in certain of the claims of the 1,584,150 patent.

Specifically applying claim 2 of 1,584,150 to the process thus disclosed in patent 1,584,149, we find:

Patent 1,584,150
Claim 2—

(a) "A process of manufacturing a fine powder of lead suboxide intermingled with powder of metallic lead" (R. III, p. 4, lines 63-65)

(b) "putting in a rotatable vessel pieces of metallic lead in a dry state" (R. III, p. 4, lines 66-67)

Patent 1,584,149
Specification—

"The present invention relates to a method of manufacturing fine powder of . . . lead" (R. III, p. 1, ls. 1-4) which "easily oxidizes" (R. III, p. 1, ls. 91-92).

Note: The experts for both petitioner and respondents are in agreement that air introduced into the mill will oxidize the lead (R. I, 239-259; R. I, 541, 537; R. II, 720; 926-929).

"As the abrasion is going on, the cylinder is replenished with lead ball (s) continuously and at a definite speed at a rate of 100 kilograms an hour." (R. III, p. 1, lines 63-66) and

"The cylinder is caused to rotate at a rate of 15-25 times per minute" (R. III, p. 1, lines 69-70).

(c) "introducing into the said vessel while rotating blasts of a gas containing oxygen, such as air" (R. III, p. 4, lines 67-69)

"... air blast having a pressure of 2.5 pounds per square inch, is sent out of the air-blower" (R. III, p. 1, lines 67-69) which is described as being located "Within this cylinder" (R. III, p. 1, line 54) and "provided with small holes" (R. III, p. 1, line 55).

(d) "causing such blast to blow the powder produced out of the vessel." (R. III, p. 4, lines 69-71)

Very fine powder "is blown out of the cylinder through the discharge orifice by means of the air blast from the said blower, and the lead powder thus blown out is lead into a suitable chamber and collected there." (R. III, p. 1, lines 73-78).

Similar comparisons may also be made with respect to claims 1, 3, 9, 11 and 12 of 1,584,150. Claims 4, 6, 8, 10 and 13 do not find support in patent 1,584,149 because of the specific limitation of maintaining a specific temperature of not less than 60°C. and these claims are therefore here excluded.

It is therefore respectfully submitted that Shimadzu should be accorded the filing date of January 30, 1922, as his effective filing date for each of claims 1, 2, 3, 9, 11 and 12 of 1,584,150, and the said claims accordingly should be held to be valid, inasmuch as this Court has already found that

"The defense of prior public use is not made out against patent 1,584,149, for which application was filed January 30, 1922."

It is therefore respectfully urged that the Court's opinion should be modified to exclude Claim 2 and also Claims 1, 3, 9, 11 and 12 of the 1,584,150 patent from this Court's holding that all of the claims of said patent are invalidated by the alleged public use since such use was not more than two years prior to the effective filing date to which each of these claims is clearly entitled. Hence, as to these claims, the concurrent holdings of the Courts below should, it is most respectfully urged, be affirmed without qualification.

V. Claims 10 and 11 of the 1,896,020 Patent Clearly Entitled to the Filing Date of the 1,584,149 Patent. Claim 10 Applied to PX-13, a Drawing Admitted in Evidence by the Courts Below as Representative of the Apparatus Disclosed in the 1,584,149 Patent.

This Honorable Court fell into error, it is believed, in failing to accord to patent 1,896,020, also copending with 1,584,149, the benefit of the filing date of the latter to overcome the alleged bar of two years public use, because the apparatus of claims 10 and 11 of said patent 1,896,020 is clearly disclosed in the 1,584,149 application filed January 30, 1922. The cases and law discussed under point IV are equally applicable here.

A detailed consideration of claims 10 and 11 of the 1,896,020 patent shows clearly that they are supported by the apparatus disclosed in the 1,584,149 patent as a means through which the process there claimed is to be carried out. Respondents introduced as PX-13 (R. I, 165), a diagrammatic sectional elevation of mechanism

described in patent 1,584,149, as to which respondents' witness stated on cross-examination (R. I, 182):

"This drawing, drawn by an ordinary engineer, deals with the specifications and not with the actual machines. I know the actual machines, also I can read specifications, and the way I see this drawing it is a proper representation of what is described in the specification."

Specifically applying claim 10 of 1,896,020 to the apparatus thus disclosed in patent 1,584,149, and illustrated in PX-13, we find:

Patent 1,896,020

Claim 10—

(a) "Apparatus for the continuous production of a product including litharge in a dry state comprising an apparatus including a vessel in the form of a drum" (R. III, p. 19, lines 114-118).

(b) "means for feeding pieces of lead into the drum" (R. III, p. 19, lines 117, 118).

(c) "means for rotating the drum to cause frictional movement between said pieces" (R. III, p. 19, ls. 118-120).

Patent 1,584,149

Specification

"... a circular hollow cylinder made of iron 60 inches in diameter and 60 inches in length (R. III, p. 1, lines 51-53).

"... Through one end of the cylinder is provided an orifice for feeding it with the material" (R. III, p. 1, lines 55-57) and

"As the abrasion is going on the cylinder is replenished with lead ball continuously and at a definite speed at a rate of 100 kilograms an hour" (R. III, p. 1, lines 63-66).

"... is horizontally and revolvably mounted" (R. III, p. 1, lines 53-54).

(d) "means for supplying under pressure an oxidizing gas to the interior of the drum" (R. III, p. 19, lines 120-122).

(d₁) "to act on said pieces to form a coating of lead suboxide thereon" (R. III, p. 19, lines 122-124).

(d₂) "to remove from the pieces the powder formed by the abrading action of the pieces against one another" (R. III, p. 19, lines 124-126).

"Within this cylinder is provided an air blower with small holes" (R. III, p. 1, lines 54-55).

"air blast having a pressure of 2.5 pounds per square inch is sent out of the air blower" (R. III, p. 1, lines 67-69).

Note: This function is clearly disclosed in 1,584,149 and the testimony of the expert witnesses for both petitioner and respondent as to which there is no substantial dispute, to-wit, that when a current of air is introduced on the lead pieces within the drum, lead oxide is formed.

"... at the other end an orifice to discharge the product" (R. III, p. 1, ls. 57-58) and

"is blown out of the cylinder through the discharge orifice by means of the air blast from said blower" (R. III, p. 1, lines 73-76).

Note: See also in this connection the modification referred to in the 1,584,149 patent, which states "whence the powdered product may be blown out" (R. III, p. 1, lines 85, 86).

(e) "means associated with said apparatus in which said lead suboxide may be converted into litharge while still in its dry state" (R. III, p. 19, lines 126-129).

Note: It is to be noted that in the 1,896,020 patent this arrangement is referred to (R. III, p. 18, ls. 61-64) as follows:

"With the construction shown, the suboxide powder may be readily converted to litharge before removal from the container b" (which is the collector).

"... the lead powder thus blown out is lead into a suitable chamber and collected there" (collector) (R. III, p. 1, lines 76-78).

Therefore Shimadzu should be accorded the filing date of January 30, 1922, as his effective filing date for apparatus claims 10 and 11 of patent No. 1,896,020, in which case the subject matter of said claims was not in public use more than two years before that date. Hence, the concurrent findings of the Courts below should be unqualifiedly affirmed.

VI. A Consideration of All the Circumstances Reveals That Petitioner Did Not Plead the Defense of Public Use Based on the 1921-1923 Hardinge Mill Activities; This Court Apparently Overlooked the Total Inadequacy of Petitioner's Proof in Fact, and Under the Authorities to Establish a Public Use, Especially Failing to Note the Clear Line of Distinction Established by the Record Between Petitioner's Experimental and Development Work, Which Was Maintained a Secret, and the Later Operation of Petitioner's Plant.

In holding that the invention of patent 1,584,150 was in public use by petitioner more than two years prior to the filing of the application therefor, this Court, it is believed, overlooked the following facts:

1. The statutory bar of "public use" was not pleaded by petitioner and therefore was not in issue;

2. The record includes three statements made under oath by the person best qualified to know the real character of petitioner's early activities, namely petitioner's engineer, Hall, to the effect that such activities did not constitute a public use;

3. The burden of proving beyond a reasonable doubt that petitioner's activities with its first Hardinge mill, 1921 to 1923, constitute such a public use as under the decisions of this Court and the Federal Courts would bar the process claims of patent 1,584,150 was on petitioner;

4. There was no burden of proof on respondents to prove that no statutory bar of public use existed against the claims of this patent;

5. All of the relevant testimony and exhibits clearly show that petitioner's use was secret and experimental although on a commercial sized apparatus. The record is completely barren of countervailing proofs.

Further, respondents respectfully but earnestly submit that in order to arrive at the conclusion that patent 1,584,150 is invalid because of petitioner's public use of the invention thereof, it was necessary for this Honorable Court to make three new findings of fact unsupported by, and inconsistent with, the record, as follows:

(a) That petitioner's operation of the Hardinge mill was continuous from June, 1921, on;

(b) That the material manufactured by petitioner in its Hardinge mill from June, 1921, on was used in the manufacture of storage batteries which were "sold in quantity"; and

(c) That petitioner's use was not secret.

These points will now be discussed in the order set forth above:

(1) Considering first the general allegations and denials of the pleadings, respondents respectfully submit that this Court's suggestion that respondents' pleadings aided or contributed in any way to placing in issue properly the particular public use defense now relied upon by petitioner, and hence that respondents are to that extent responsible for raising this issue, is in error and unsupported by the record.

A careful analysis of the bill of complaint discloses that respondents pleaded, with respect to each of the inventions of the patents in suit, that the same had not been in public use for more than two years before the applications therefor were filed (see paragraphs 5, 7 and 15 of the Bill of Complaint, R I, 8, 9, 14). The petitioner answered each of the foregoing allegations by denial based on lack of information, positively asserting

that "it was not informed" (save by the bill of complaint) as to the truth of respondents' allegations—including those relating to the two-year public use bar (see paragraphs 5, 6 and 10 of petitioner's Answer, R I, 28, 30). By this language the denial in the answer is limited so as to exclude any alleged prior public use of which petitioner was informed at the time of making said answer.

Stated otherwise, respondents alleged, in effect, that there was no statutory bar of two-year public use. In its answer to these particular paragraphs petitioner in effect denied the truth of such allegations on lack of information, stating that it "is not informed." Obviously, it must have been informed of all activities in its own plant. Hence, by the very wording chosen by petitioner itself, the particular alleged prior use now relied upon was **excluded** by its own pleadings.

Moreover, considering now the alleged affirmative allegations with respect to the pleading of "public use," it is also respectfully urged that petitioner has failed properly and unequivocally to set up the defense of "public use" in contradistinction to prior knowledge or use to show prior inventorship notwithstanding that in R. S. §4886 and §4920 "public use" is distinctly specified as a different and separate defense from that of prior knowledge and use.

Pertinent paragraphs of petitioner's answer are 18; 19 and 26 (R. I, 32, 33, 35) which allege as follows:

"18. Answering Section 24 of the bill, defendant denies all acts of infringement and denies the appropriation and use of any informa-

tion, data or disclosure of Shimadzu's alleged inventions, and alleges that it was successfully making, using and selling its product long before it ever heard of Shimadzu or of his alleged inventions and patents.

"19. Answering Section 25 of the bill, defendant denies all acts of infringement with which it is charged, but admits that it is practicing the process and making a product described and claimed in U. S. letters patent to Hall, No. 1,888,823, dated November 22, 1932, and which it used commercially and successfully long prior to any date of invention established by Shimadzu in said interference proceedings."

"26. . . . defendant avers that the claims of said letters patent are invalid and void because the subject matter thereof was, prior to the alleged invention thereof by Shimadzu, and for more than two years prior to his application dates, **known to and used by** the defendant at Philadelphia, Pennsylvania, and by the Willard Storage Battery Company at Cleveland, Ohio."

Paragraphs 18 and 19 of the answer are insufficient in law to plead a statutory public use bar, due to the omission of the necessary allegation that the use was "public" for more than two years prior to the filing of the applications. In **Agawam Co. v. Jordan**, 74 U. S. 583, an allegation that the invention had been in public use **long prior to the filing of the application** was held insufficient to raise this defense. See also **Bates v. Coe**, 98, U. S. 31, 37, 45-47. Moreover, the allegations of paragraph 19 of the answer referring to commercial and successful use of the Hall process and apparatus appear in the admission clause and not in the

denial part so that no issue whatever could be raised by such allegations.

This leaves only the allegations of paragraph 26 of the answer for consideration. The issue is whether this paragraph properly pleads a prior "public use" under R. S. §4886 and §4920. Clearly, this paragraph of the answer pleads defense of **prior knowledge and use**, which properly is directed against the patentee's right to the claim of **original and first inventor**. Prior knowledge or use **before** the patentee's **date of invention or discovery** nullifies the patent. It may be **more or less** than two years prior to the filing of the application for patent but if prior to the patentee's date of invention or discovery, the patent is of no validity.

The defense of "public use" is not addressed to that issue but is in the nature of a plea in confession and avoidance. The use must be **public** and must have been so used for more than two years prior to the filing of the application for patent, irrespective of whether such public use was **before or after** the patentee's date of invention or discovery. The two defenses are therefore in the express language of the patent statutes and in logic separate and distinct. Under R. S. 4920, prior knowledge and use is a defense under paragraph 4th, whereas public use is a defense under paragraph 5th.

The only language in paragraph 26 of the answer that lends color to petitioner's claim (which respondents do not admit) that a public use bar was pleaded are the words "for more than two years prior to his application dates **known to and used by** the defendant at Philadelphia, Pennsylvania . . ."

It is well established that the fundamental purpose of R. S. §4920 in requiring special notice of this defense is to prevent surprise and to permit a patentee to be reasonably apprised of issues which confront him and to defend the same. The question arises whether the allegation above quoted properly put in issue this defense and whether it constituted fair, equitable and reasonable notice thereof to respondents.

Respondents most earnestly urge that paragraph 26 of the answer pleaded, when fairly construed, the defense of prior knowledge and use and not public use. The authorities are unanimous that "public use" must be specifically, distinctly and separately pleaded as an affirmative defense, and a strict compliance with statutory requirements has been held essential. The language used by petitioner admittedly is ambiguous, if not astutely employed.

Respondents are not attempting to lay great stress on mere technical or formal defects in the pleadings. They are in fact in a far worse position than a plaintiff who at the hearing has been taken by surprise by the defense of public use. The injustice of permitting this procedure has been appreciated and remedied by R. S. §4920, which requires that thirty days' notice before the hearing be given if the defense is to be relied upon. Not only was no notice given but the defense was not urged until after the trial and hearing had been completed.

That petitioner intended not to set up a public use defense by the pleadings, based on its Hardinge mill activities, or introduce proofs of the same at the trial was fully and emphatically confirmed by statements of counsel for petitioner which clearly excluded the Hardinge

mill activities as a "public" use. At the hearing (R. 742, 743, Original Transcript), counsel for respondents pointed out to the Court that in Hall's original application and during the interference Hall had sworn that these very activities now set up were "not in public use for more than two years prior to his filing date and he filed in 1924." In reply thereto counsel for petitioner stated "That is the Hardinge mill." Hence, it will be seen that counsel for petitioner definitely indicated that the oath filed by Hall to the effect that his invention was not in public use more than two years prior to his filing date in 1924 was correct. Respondents unhesitatingly state that none of the proofs introduced by them and none of their cross-examination of petitioner's witnesses was directed to the issue of public use because none was in issue.

Further petitioner instituted and prosecuted the Hall v. Shimadzu interference (R. I, 69). It and Hall maintained throughout that Hall was entitled to the monopoly of the 1,584,150 patent. They lost, but as a result, Hall amended his claims and obtained two patents covering the apparatus and process. This they were able to do because of Hall's oath that no public use existed for more than two years prior to March, 1924. Had petitioner and Hall revealed or contended that the 1921 activities were public, they would never have been able to maintain the interference or to obtain the patents they now possess.

Knowing these circumstances, it was unimaginable that petitioner would contend that the very activities forming the basis of its interference and the Hall pat-

ents constituted a public use. Such a position would have been untenable.

No responsible company, such as petitioner, could or would care to take such an equivocal position. With these facts in mind, a careful review of the pleadings will reveal that petitioner could not and did not plead public use and that it was most natural and reasonable for respondents to assume from the particular phraseology of the answer that public use was not pleaded. Consequently, this Court's opinion that this issue was before the parties is not only at variance with the actual facts, but respondents have not had its day in court on this question.

If, however, the Court is unable to agree with respondents, then in view of the ambiguity of findings below and in order to prevent a gross miscarriage of justice, the cause should be remanded to the District Court for a specific finding on this issue.

It is therefore respectfully submitted that it is grossly unjust and inequitable to permit the petitioner to now rely on the defense of public use, particularly in view of the fact that the public use relied on is petitioner's own public use, whereas in its answer petitioner alleged that it had no knowledge of any public use. As of that time all of the information concerning petitioner's activities was wholly within petitioner's knowledge.

(2) The development of petitioner's process was entirely in the hands of its engineer, Hall, who was employed by petitioner for this specific purpose. On March 29, 1924, Hall filed two applications for letters patent, one entitled "Leaden powder and method of making the

same," Serial No. 702,889, and the other entitled "Apparatus for Making Leadene Powder," Serial No. 702,890. These applications matured as patents 1,888,823 and 1,675,345, respectively. In the oath accompanying application 702,889, Hall stated that the invention disclosed therein was not "in public use or on sale in the United States for more than two years prior to this application." The same statement under oath appears in application Serial No. 702,890. Again, on March 26, 1927, Hall executed under oath a preliminary statement which was subsequently filed in the Hall v. Shimadzu Interference which involved Shimadzu's patent 1,584,150 "that the invention was not in public use or on sale within two years prior to filing the original application." Thus we have three statements all made under oath by the engineer who developed petitioner's process, which statements were made long prior to the commencement of this suit, to the effect that whatever Hall's activities prior to March 29, 1922, may have been, they did not constitute "a public use". These oaths alone conclusively rebut any charge that the petitioner's activities as early as June, 1921, constituted a public use.

Both petitioner and Hall, "in whose shoes defendant (Petitioner) stands" (R. I, 69, 106), are clearly estopped from relying on the defense of public use. Shimadzu, relying on Hall's representation that no statutory bar of public use existed to bar the grant of a valid patent, engaged in the interference which was provoked by Hall in 1927, and at great expense litigated the same to a final conclusion before the Court of Customs and Patent Appeals in 1932. The testimony offered by, and on be-

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266

38-69



half of Hall having clearly shown infringement by petitioner of Shimadzu's patent, this suit was instituted to enjoin the same and to recover profits and damages. Thus, for twelve years Shimadzu has been denied full enjoyment of his patent rights and has been put to many thousands of dollars of expense. If Hall's representation in respect of public use was in fact a misrepresentation, all of the elements of an estoppel are present. Shimadzu relied upon the same and in so doing suffered great damage. Again, Shimadzu's licensees, all large American manufacturers, have suffered irreparable damage over a period of many years by reason of their reliance on the truth of the allegations of Hall and petitioner. Clearly, petitioner is now estopped from denying the truth of the allegations of Hall's oaths.

(3). The burden of proving that the activities with the Hardinge mill in June, 1921, constitute a public use was on petitioner. **Eibel Process Co. v. Minneapolis & Ontario Paper Co.**, 261 U. S. 45. This burden petitioner must sustain and prove beyond a reasonable doubt. The defense cannot be established by dubious proofs. This rule has been so often and authoritatively enunciated by this and other Federal Courts that the citation of cases is deemed unnecessary.

(4) It follows as an inevitable corollary that there was no burden on respondents to disprove the existence of the statutory bar of public use. They could properly rely upon the presumptions arising from grant of the patents. Unless and until this defense is properly placed in issue and prima facie established, no burden whatever existed on respondents to come forward with countervailing proofs

(5) This brings up the question: Do the proofs in the record establish a statutory bar of public use? Respondents answer that they do not, and respectfully submit that this Court must have overlooked the insufficiencies of the record, which clearly show the failure of petitioner to establish the public use relied upon.

This Court has consistently held in **Langnes v. Green**, 282 U. S. 531, 583; **Stelos Co. v. Hosiery Motor-Mend Corp.**, 295 U. S. 237; **Commission v. Havemeyer**, 296 U. S. 506, 509; **Helvering v. Gowran**, 302 U. S. 238, 245; **Helvering v. Pfeiffer**, 302 U. S. 247, 252, 253, that even though no cross-petition was filed, respondents are not estopped from urging any reasons of record in support of the decrees entered below. It is believed this Court overlooked this rule of law which is especially applicable here where:

1. Petitioner applied to this Court for writ of certiorari as to those parts of the decrees below entirely in respondents' favor; and

2. Respondents could not have properly petitioned this Court for a writ of certiorari as to those parts of the decrees below in their favor.

The record is completely barren of a single bit of oral testimony or a single exhibit which shows or even tends to show:

- (a) That petitioner's operation of the Hardinge mill for a long period of time after June, 1921, was continuous;

- (b) That a single ounce of powder produced by petitioner in its Hardinge mill during the year 1921 was used in the manufacture

of storage batteries or any other product "which have been sold in quantity" or in any other manner;

(c) That the location of the Hardinge mill in the petitioner's plant during 1921 was such that any employees other than those directly engaged in the operation of the mill had access to or were ever permitted to see the mill in operation or any other time;

(d) That those few employees directly engaged in the operation of the mill were not pledged to secrecy.

In construing the language of the District Court "commercial production" as tantamount to a holding of "public use"; this Court made findings of fact *de novo* in that it decided affirmatively the fact issues listed above. In so doing, this Court went much farther than even petitioner urged is warranted by the record. It is significant to note that in its briefs filed in this Court and in its oral argument before this Court, petitioner did not contend that its activities at any time during the year 1921 constituted a public use. Petitioner based its prayer for a holding of public use entirely on the language which appears in the opinion of the District Court of "commercial production" plus the fact that respondents produced as one of their witnesses, one (not several as stated in this Court's opinion) former employee of petitioner who did not enter the employ of petitioner until more than two years after June, 1921, and who therefore could have had no personal knowledge concerning petitioner's 1921 activities. The only record citation made by petitioner with respect to any facts bearing on the issue of public use in any of its briefs or

during its oral argument before this Court is a passing reference appearing on page 16 of petitioner's reply brief to substantiate the fact that some sort of powder was made during 1921 from which battery plates were made. Even a casual checking of the record citation (R. I, 465) quickly reveals that the plates referred to were manufactured for test purposes only.

That the operation of the Hardinge mill by petitioner during the entire year 1921 was intermittent and at extremely infrequent intervals and only for the purpose of producing powder to carry out the experimentation called for by defendant's exhibit 68 is clearly shown by the record. The tabulation of the data contained in defendant's exhibits 60 through 65 reveals that during the entire latter half of the year 1921 the dates and number of hours that the mill was operated are as follows:

Def. Ex. 60	June 14, 1921	16 hours
Def. Ex. 62	August 19, 1921	22 hours
	August 20, 1921	
Def. Ex. 61	Sept. 26, 1921	45 hours
	Sept. 27, 1921	
Def. Ex. 64	Oct. 6, 1921	5 hours
Def. Ex. 65	Nov. 18, 1921	1 $\frac{3}{4}$ hours
Def. Ex. 63	Dec. 6, 1921	11 hours

Total . 100 $\frac{3}{4}$ hours

Thus, it will be seen that the mill was operated on but six occasions from June 14, 1921, to December 6, 1921, for a total of 100 $\frac{3}{4}$ hours. This circumstance alone clearly demonstrates that the operation was not "the ordinary use of a machine for the practice of a process in a factory in the usual course of producing articles for commercial purposes."

Petitioner in its Bill of Particulars (R. I, 120) confirmed the fact that the log sheets in evidence represent the only occasions upon which the mill was operated, stating that among other things, it intended to rely on "log sheets beginning February 11, 1921, for every day the mill was run" prior to July 14, 1921, to establish the defense of prior knowledge and/or use.

At no time during the entire suit has petitioner contended that any of the powder produced by it in its Hardinge mill during the year 1921 was used in the manufacture of plates for storage batteries which were sold.

Testimony relating to the disposition of the powder was given orally by petitioner's witness Smith as follows (R. I, 465):

"During all the year of 1921, and more especially during the latter part of the year, the lead dust from the Hardinge mill had been constantly used to make battery plates, and these battery plates had been put through formation and subjected to many tests. As a result of this testing of various lots of Gray Oxide, Hall, by the end of 1921, had confirmed the general conclusion of Kershaw that, approximately seventy per cent litharge content was the optimum composition, and accordingly adopted sixty-seventy per cent as his limits; later further narrowed down to sixty-five, seventy per cent. The figure of sixty-five, seventy per cent PbO content has remained the standard up to the present time.

"As already noted, as soon as the Hardinge mill started to produce lead dust in quantity, this material was made into plates, which were then tested by the laboratories. Exhibit 68, headed Special Process Number 5065, was issued

by the Department of Development and Design, on April 22, 1921, instructing the superintendent's department to make certain plates with lead dust, under the supervision of Kershaw. This Special Process Number 5065 was subsequently extended by the issuance of forty-two other sheets calling for additional plates, the last sheet, dated October 26, 1922. Upwards of 3,700 motive power plates, and 55,000 starting plates were made under this Special Process Number 5065, and the tests of these plates satisfied The E. S. B. Company that the material made by Hall—slight error, typographical error there—that the material made by Hall in the Hardinge mill was substantially like that produced by Kershaw in the German type of mill, and that it was perfectly satisfactory to use.

"By the latter part of 1922, all the product which could be produced by the Hardinge mill (now known as Gray Oxide) was used in standard plate production, but the quantity available fell far short of the total demand."

This is the testimony upon which petitioner is relying to establish an operation so commercial in nature as inevitably to constitute a public use. The testimony clearly shows nothing but experimental and test operation until the latter part of 1922. Examining petitioner's Exhibit 68, which is entitled "Experimental Shop Process," it is to be noted that Mr. Howard was instructed to deliver to the storeroom the positive plates which were to be pasted on three consecutive days with powder received from the Hardinge mill. The last paragraph on this exhibit states:

"Careful note to be made of condition of plates as to scaling, etc., and all plates delivered to Storeroom to be held as special and delivered to Laboratory as called for."

Moreover, attention is specifically called to the fact that directions were included to "Please allow Mr. Kershaw to give this personal supervision." It is significant to note that although Mr. Kershaw was called to testify, he was not asked any question with respect to these alleged tests, the legal inference clearly being that if he had been so examined, his testimony would have been unfavorable to petitioner. Moreover, it is important to note that the procedure under the "Experimental Shop Process" of exhibit 68 was continued as Smith supra states until October, 1922, well beyond the critical period. Had any of the material produced during this period been sold, petitioner would have been able to have established that fact by evidence as elaborate as that which it produced to establish its single sale of batteries manufactured from material produced by it in 1916 or 1917 by its Tudor mill. It is obvious that the fact finding of this Court that petitioner employed the alleged infringing machine and process for the "production of lead oxide powder used in the manufacture of plates for storage batteries which have been sold in quantity" since June, 1921, is clearly in error and totally unsupported by the record. In fact, the record contains negative proof that none of the powder produced in 1921 was used for commercial purposes. Petitioner was called upon to give figures showing the percentage which the material manufactured in the Hardinge mill and used in production bore to the total amount of material used by petitioner

in its manufacture of storage batteries. Figures were given for each year commencing with 1922 through 1934. **No figure was given for the year 1921.** As to the figures given for other years, petitioner merely stated that the quantity of oxide manufactured in its Hardinge mill equalled a certain percentage of the quantity of oxide which it used in commercial manufacture, but failed to state how much, if any, of the material manufactured in the Hardinge mill was used in commercial manufacture prior to 1923.

Petitioner throughout the trial, especially by its counsel's remarks quoted supra from the original transcript, definitely led respondents to believe that the Hardinge mill activities were not advanced as a "public" use; each time petitioner subsequently advanced a contrary contention, respondents have successfully sustained the proposition that a public use based on these activities had not been originally properly pleaded. Hence, in view of the fact that petitioner's actions resulted in preventing respondents from "having their day in Court" on this issue respondents have now undertaken an investigation and examined two witnesses, one of whom was in the employ of petitioner until shortly before the trial and the other of whom respondents learned about from the former. The affidavits of these two witnesses are attached to this petition in order to enable the Court to learn the true facts with reference to (1) the lack of publicity of the alleged use, and (2) the lack of sale of the product during the year 1921. Hence, respondents respectfully pray that this Court consider these affidavits in connection with the record.

No testimony was taken bearing on the question of secrecy of operation. Now that the issue has been raised, respondents have ascertained from the annexed Affidavits of Clarence J. Treston and John J. Deegan that "efforts were made to conceal" (Opinion, pg. 11) the experiments. A consideration of these affidavits will show this Court that the utmost secrecy surrounded the experiments conducted with the Hardinge mill during the critical period as these affiants, although employees in the chemical laboratory, were instructed not to enter the building where Hall was conducting the experiments and the matter was to be treated as a "secret."

The defense of public use must be proven beyond a reasonable doubt and the finding of public use based on inference is, we submit, clearly in error. It is too well settled for argument that he who has the burden of proof must sustain the same by adequate evidence. If he fails to do so, he must inevitably lose. Where no evidence is directed to the issue, a holding that the burden has been sustained is clearly unwarranted.

Again, there is not a word of testimony in the record to indicate whether or not those few employees directly engaged in operating the Hardinge mill during 1921 were pledged to secrecy. Here again is an additional fact, proof of which should properly have been offered by petitioner if it hoped to sustain its burden of proving public use beyond a reasonable doubt. Failure of petitioner to introduce such proofs certainly should not give rise to the inference favorable to petitioner that such employees were not enjoined to secrecy.

While the Court below stated that "commercial production by the Hardinge mill with its forced air draft undoubtedly involved the use of plaintiff's patent, and June, 1921, may be fixed as the date when that began," respondents submit that this finding is in error if it is intended as meaning that the petitioner from June, 1921, on was operating its Hardinge mill day in and day out to produce large and regular quantities of material of sufficiently uniform character to be used in the fabrication of storage battery plates and was so used in the plates so fabricated and sold in the ordinary channels of trade. Respondents further and most earnestly submit that this finding cannot be so construed in view of the total absence from the record of any facts which would offer the slightest support or which would even lend color to such an interpretation.

The District Court obviously did not make a specific finding of public use. Nowhere in the findings of fact does the word "public" appear. This Court has seen fit to construe the holding of "commercial production" as tantamount to a holding of "public use". If there be uncertainty as to the exact meaning of the language employed by the District Court, such uncertainty should be resolved by reference to the record and the language should be given only such meaning as finds support in the record. This Court has apparently failed to follow this procedure but, on the contrary, has made an inference as to the character of petitioner's 1921 Hardinge mill operation from which inference it has made a second inference; to-wit, that the inferred character of operation constituted in fact a public use.

The District Court clearly indicated its meaning of the term "commercial production" as used by it in contradistinction to the "public" phase of such use where the Court stated (R. II, 1164):

"* * * some process by which the right kind of powder could be produced in trifling amounts, was of very little value to anyone. The industry was looking for a way to make large quantities cheaply, and an invention which fell short of accomplishing that result would have been of academic interest only."

Again (R. II, 1176), the Court pointed out by contrast that the Tudor mill did not "meet the requirements of a commercially useful process." Hence the Court's use of the word "commercial" is consistent in distinguishing between an operation conducted on a commercial scale in order to determine its economic value from one conducted on a laboratory scale which might prove nothing. If so much weight be accorded to the lower Court's use of the term "commercial production" in its first decision, in all fairness to respondents, it seems evident that like weight should be given to that Court's term "reduction to practice" (which eliminates any thought of "public" use) in characterizing the identical activities as appears in the District Court's decision on rehearing published 36 U. S. P. Q. 25. There is no connotation in the Court's use of "commercial" indicating an intent to characterize the experimental work as a "public use". The record abundantly establishes that not only was the use of the process in June, 1921, entirely experimental, but the experimental character continued for many months thereafter during which numerous changes were made while

Hall was searching for a satisfactory and economically operative process.

Where such experimentation has characterized the use, the courts have uniformly held that such use did not raise the bar of public use referred to in R. S. 4886, even though there were incidents of profit accompanying the use. In the present case, however, the record establishes that petitioner's use in June, 1921, of its process was not even for profit. Therefore, the facts bring the June, 1921, experimental use well within the rulings of this and other courts as to what is no more than an approach toward a yet unaccomplished end. Not until the experimentation has reached its goal does the two years begin to run, and in June, 1921, Hall was far from having perfected a satisfactory process. Thus, defendant's own exhibits, DX-61, 62, 63, 64 and 65 show that in August, September, October, November and December, 1921, Hall was still experimenting with variations in load, speed of revolutions, degree of oxidation and quantity of air employed, the tests in October, November and December materially reducing the amount of air, and increasing the peripheral speed to obtain **an increased production** whereas the final commercial success required **just the opposite, i. e., an enormous increase in the amount of air and a reduction in the peripheral speed.** Prior to the conclusion of his experiments, Hall's process certainly was not in public use.

It will be noted from the file wrapper of the Hall patent No. 1,888,823 (Pl. Ex. 18) that Hall pointed out with great particularity the fact that the usable finished product which came from his mill was blown from the

mill by the current of air passing therethrough and that such material as spilled out mechanically through the discharge trunnion was of too coarse a nature to be used and was returned to the mill for further attrition. But, not until 1923 did Hall reverse the direction of travel of the air passing through the mill so that it could remove any substantial quantity of suitable powder (R. I, 466).

The attention of this Court is respectfully invited to respondents' discussions presented in its main brief and in its reply brief filed with this Court under the caption "Point III," in which a detailed showing is made of the manner in which petitioner varied the operating conditions throughout the entire year of 1921, conditions which petitioner's own witnesses termed "vital". In addition, Hall stated (R. II, 1041):

"We kept on getting larger fans until we could get the amount of air through the mill that we wanted.

"Q. And you desired to increase the amount of air, is that right?

"A. Three hundred cubic feet is what we wanted for this particular product. At one time, at least, during the time of the filing of the application we were using one hundred and fifty cubic feet, we were getting a small amount of product out."

Hence, Hall clearly indicates that they wanted a large amount of air (three hundred cubic feet). However, the record is entirely silent as to when they changed from the fans of insignificant size used in 1921 (maximum capacity 33 cubic feet per minute) to the relatively enormous fans delivering from 500 to 1000% more air. It is

respectfully submitted that those facts when considered with the above present a clear and convincing picture of nothing more than a prolonged period of experimental operation during which time petitioner was concerned with a determination first, of whether or not it could make powder which indicated suitability for storage battery purposes and second, whether or not storage batteries of acceptable quality could be manufactured from the powder. As is well known in the storage battery industry, the second class of experimentation alone requires an extremely long period of time, as the only manner in which storage batteries can be satisfactorily tested for life is to submit them to life tests in the field. The average life of the ordinary automotive type storage battery is approximately eighteen months. Certainly this petitioner, a large manufacturer of storage batteries, was not going to jeopardize its good will by selling batteries manufactured from its Hardinge mill oxide until it had run a sufficient number of tests over a sufficiently long period of time to satisfy itself that the batteries so manufactured would not be inferior to petitioner's standard production batteries made from purchased oxides.

That an experimental use is not a public use under the statute is recognized by this Court in reference to **Elizabeth v. Pavement Co.**, 97 U. S. 126. The foregoing facts bring the instant case well within the doctrine of that case. See also **Beadle v. Bennett**, 122 U. S. 71, 76, 77.

Unlike the facts set forth in **Smith and Gregg Mfg. Co. v. Sprague**, 123 U. S. 249, 265, the facts of the instant case do show that Hall after June, 1921, continued to

vary his process so that "more than one mode of overcoming the difficulties experienced was suggested and tried." Unlike the facts set forth in **Root v. Third Ave. Railroad Co.**, 146 U. S. 210, 225, Hall was continuously making "experiments with a view to alterations" and "keeping the invention under his own control." Unlike the facts in **Manning v. Cape Isinglass & Glue Co.**, 108 U. S. 462, 465, Hall was during this time repeatedly making material changes in the process.

The doctrine of **Elizabeth v. Pavement Co.**, 97 U. S. 126, has been applied by the Federal Courts in many cases where, as here, experimentation was carried on in good faith in an effort to complete and perfect the invention, even though the experiments were performed under conditions in which the public had access thereto (**Harmon v. Struthers**, 57 F. 637, 641, C. C. W. D. Pa.; **Pacific Cable Ry. Co. v. Butte City St. Ry. Co.**, 55 F. 760, 765, C. C. Mont.; **Westinghouse Electric Manufacturing Co. v. Saranac Lake Electric L. Co.**, 108 F. 221, 228, C. C. W. D. N. Y.; **Eclipse Machine Co. v. Harley Davidson Motor Co.**, 252 F. 805, 811, C. C. A. 3; **Los Angeles Lime Co. v. Nye**, 270 F. 155, 162, C. C. A. 9; **Austin Machinery Co. v. Buckeye Traction Ditcher Co.**, 13 F. (2d) 697, 698, C. C. A. 6; **Kearner Incinerator Co. v. Townsend Estates**, 27 F. (2d) 599, 604 (affirmed C. C. A. 6, 27 F. (2d) 606); **Reo Motor Car Co. v. Gear Grinding Machine Co.**, 42 F. (2d) 965, 968, C. C. A. 6; **Cleveland Trust Co. v. Schriber-Schroth Co.**, 92 F. (2d) 330, 336, C. C. A. 6 (reversed on other grounds by this Court, 305 U. S. 47). In all of the foregoing cases the rule is recognized that, to use the language of the Court in **Reo Motor Car Co. v. Gear Grinding Machine Co.**, *supra*,

"... So long as the use by the inventor, or even sales to the public can fairly be considered experimental and collateral to the development of the invention in its complete form, the bar does not begin to run."

The foregoing analysis of the record evidence clearly establishes that Hall was experimenting "in good faith, in testing (the) operation" (*Elizabeth v. Pavement Co.*, supra), of the process from June, 1921, until 1922 or 1923 attempting to develop his invention into its completed form. Hall obtained two patents in the United States based on his oath that these identical activities were **not a public use** relying undoubtedly on the rule of law that he was experimenting with the machine and engaged "in good faith, in testing its operation." Hence, neither Hall nor his privy, petitioner, should now be heard to say that Hall was not then proceeding "in good faith in testing" the invention, but should be bound by these affirmations. Moreover, the record clearly confirms the truth of Hall's original oaths and shows that the use of the Hardinge mill in June, 1921, was a mere stage in this developmental work. It was followed as before pointed out by numerous alterations in the procedure in his searching about for a successful solution of the problems with which he was confronted. Even if during this experimental period Hall or his assignee had derived profit from the experimental use of the process referred to, the use would not have been outside of the rule of *Elizabeth v. Pavement Co.* where, as here, the experimentation was the dominating consideration (cf. *Wendell v. American Laundry Ma-*

chine Co., 239 F. 555, 558, affirmed C. C. A. 3, 248 F. 698). But the record additionally establishes as above pointed out that there was no profit derived from the use of the invention, that the product produced by the use of the process was not used commercially, and that all of the powder made during Hall's experimental period was employed in plates delivered to the laboratory for the purpose of tests.

WHEREFORE, respondents respectfully pray:

(1) That the corrections requested in Points I to V, inclusive, be allowed and appropriate modifications of this Court's judgment be entered accordingly.

(2) In connection with Point VI, respondents respectfully pray—

(a) That this Court grant a re-hearing of the question of public use; or

(b) That this Court reconsider and vacate its judgment based on the public use issue and unqualifiedly affirm the concurrent findings of the Courts below that the 1,584,150 and 1,896,020 patents are valid; or

(c) That this Court modify its judgment, vacate the order of reversal and remand the case to the District Court for further proceedings in connection with the public use issue, with authority to take further testimony if, in its discretion, such action is necessary, make findings on the fact issue of public use and enter its decrees accordingly.

(3) That this Court stay the issuance of its mandate herein until a disposition of the matters prayed for in this petition has been finally made by this Court.

Respectfully submitted,

GENZO SHIMADZU,
NORTHEASTERN ENGINEERING CORPORATION.

By EDMUND B. WHITCOMB,
GEO. WHITEFIELD BETTS, JR.,
JOSEPH W. HENDERSON,
Counsel for Respondents.

GEORGE H. SOUTHER,
GEORGE YAMAOKA,
Of Counsel.

Dated: Toledo, Ohio, May 11, 1939

CERTIFICATE

I hereby certify that I am a member of the Bar of the Supreme Court of the United States; that I am counsel for Genzo Shimadzu and Northeastern Engineering Corporation, respondents in the above entitled cause; that the foregoing petition for rehearing has been prepared in accordance with the request of the respondents; and that it is presented in good faith in the belief that it should be granted and not for delay.

EDMUND B. WHITCOMB.

AFFIDAVIT OF CLARENCE J. TRESTON

STATE OF OHIO, }
COUNTY OF LUCAS } ss.:

CLARENCE J. TRESTON, being first duly sworn, deposes and says:

1. He is 51 years of age, a chemist by occupation, having attended Temple University in Philadelphia taking the chemical course, and ever since that time has been engaged in chemical or industrial chemical work.

2. In May, 1920, he entered the employ of petitioner, The Electric Storage Battery Company of Philadelphia, Pennsylvania, manufacturers of storage batteries, and, excepting for approximately seven months in 1927, was in its employ until May, 1935, engaged as an analytical chemist and in process control work and employed in the chemical department under the chief chemist, George M. Howard, and the immediate supervision of one W. Y. Kelly, his assistant. Deponent's duties during this time included analyzing various lead compounds, such as lead oxide, litharge, red lead and many other substances used in the manufacture of storage batteries.

3. Deponent became acquainted with Clarence A. Hall, in the year 1920 and throughout the years 1921 and 1922 and part of 1923, tested many samples of material which were delivered to the chemical laboratory in the company's main building on the southeast corner of Allegheny Avenue and Nineteenth Street, Philadelphia, by operators working under said Hall and operating what was known as "the experimental mill" located in a sep-

arate building a half-block away from Allegheny Avenue on Nineteenth Street and not physically connected with any other buildings of the petitioner's plant. These experiments related to a process for making lead oxides of the general type to be employed in the manufacture of storage batteries, although at the time The Electric Storage Battery Company was purchasing large amounts of litharge and red lead for this purpose.

4. All through the years 1921, 1922 and part of 1923 deponent was never permitted to enter the separate building in which the experimental mill was located and to his knowledge no other employees of the chemical laboratory were permitted to enter same. Deponent further states that during that period he knew that there were definite orders to keep away from this building, and the understanding was prevalent among all employees of The Electric Storage Battery Company that the matter of this mill was to be treated as a secret. All the mill operators with whom deponent came in contact as they delivered samples from the experimental mill to the chemical laboratory where deponent made the analyses referred to maintained silence (with the single exception with reference to mechanical difficulties hereinafter referred to) with respect to the operations going on, and the entire efforts on the part of Hall during all of 1921 and 1922 were regarded at the plant as a secret, any facts of which were not to be divulged to any one and his co-employees were instructed not to discuss the matter.

5. When these samples were delivered to the laboratory from time to time on several occasions during the years 1921 and 1922, the operator stated that he would

not have any more samples to deliver for a period of time in the future in view of the fact that the mill was shut down because of various troubles experienced in the operation of the same. Contrasted with deponent's subsequent work in testing similar samples from the Crescentville plant to all parts of which deponent had free access, the samples deponent received from "the experimental mill" in the separate outside building on Nineteenth Street were received only extremely intermittently and not continuously. At no time in the year 1921 were the samples from this experimental mill delivered to the chemical laboratory regularly day by day, although deponent recalls that in 1922 samples came more frequently to the laboratory.

6. Deponent was transferred in March, 1923, to the chemical laboratory at the Crescentville plant of The Electric Storage Battery Company, located at Rising Sun Avenue and Asylum Pike, a distance of a few miles from the Allegheny Avenue plant.

7. Deponent in his work as analytical chemist in the chemical laboratory in Crescentville plant analyzed samples from the new oxide mills as a part of his routine duties. In this connection the laboratory received one sample for each shift for each mill during operation; with three shifts a day and four mills in 1923 the laboratory received twelve samples per day whereas in 1924 with eight mills running, the laboratory received twenty-four samples per day. These samples were received practically every day throughout the year showing continuous operation of the mills at the Crescentville plant compared with the intermittent operation of the "ex-

perimental mill" at the Nineteenth Street near Allegheny Avenue plant.

8. Deponent in 1921 and 1922, when he received these samples from "the experimental mill," made two different types of tests on each sample, one the percentage oxidation test, two, the screen test. The first test determined the amount of PbO in the sample and the second determined the fineness of the material. Deponent knew at the time that various percentages of oxidation were found in samples from "the experimental mill" and from time to time that various percentages passed the 200 mesh screen.

9. Frequently during the years 1921 and 1922, Mr. Hall came into the chemical laboratory where deponent made the analyses and discussed the matters of this experimental work with the chemist in charge so that deponent learned the nature of Hall's work from time to time.

10. Whereas deponent knew as a matter of fact that the production from the Crescentville mills was used continuously in standard plate production, deponent does not know and does not believe that any powder produced from "the experimental mill" was used in the regular commercial production work of plates for storage batteries in 1921. On the contrary, deponent knows that during 1921 a large percentage of material produced by "the experimental mill" was rejected as unfit for testing in storage batteries and scrapped in accordance with the general practice at The Electric Storage Battery Company plant.

11. Deponent's routine work as chemical analyst and in process control included testing both experimental and standard product materials so that in connection with deponent's regular activities he soon learned whenever an experimental process had reached a point of commercial satisfaction. It was not until July, 1923, when the mills erected at Crescentville began production on a commercial scale that deponent had any knowledge of any commercial operation of the process or of any commercial utilization of the product.

12. During the year 1921 the amount of powder produced by the experimental mill was so small as to be insufficient to indicate the success of the method for producing quantities for commercial purposes, especially as compared with the millions of pounds of litharge and of red lead purchased by the Company in the years 1921 and 1922, the amounts of which deponent knew because each drum received was numbered consecutively and the samples received in the chemical laboratory were identified by the numbers of the drums from which they were taken. Deponent recalls that during the years 1921 and 1922 the drum numbers were extremely high, indicating the purchase of millions of pounds referred to.

13. Deponent has examined several of the exhibits introduced by The Electric Storage Battery Company and from his experience and intimate contact with the production of oxide material states that in view of the intermittent production and the small number of pounds per hour produced by the "experimental mill" contrasted with the production per mill with which deponent was connected at the Crescentville plant, deponent does not

regard any production in the year 1921 as commercial production for storage battery purposes under the Hall process.

14. Deponent further states to the best of his knowledge and belief that throughout the years 1921 and 1922 no visitors were ever permitted in the "experimental mill" building of The Electric Storage Battery Company; that even at the Crescentville plant, visitors were not permitted to enter the gray oxide plant; that deponent distinctly remembers that a foreman regularly employed in another department by the company was ordered out of the Crescentville gray oxide plant; and that a sign was posted up instructing persons not employed in that department to keep out.

CLARENCE J. TRESTON

Sworn to and subscribed before me this 6th day of May, 1939.

L. W. KAHL,

Notary Public, Lucas County, Ohio,
My commission expires Jan. 9, 1940.

(Seal)

AFFIDAVIT OF JOHN J. DEEGAN

STATE OF PENNSYLVANIA }
COUNTY OF PHILADELPHIA } ss.

JOHN J. DEEGAN, being first duly sworn, deposes and says:

He is of lawful age, and a resident of the City of Philadelphia, Pennsylvania, 4549 North Fifth Street, and at present is employed by the Pennsylvania Liquor Control Board, and has been so employed since October, 1935.

Prior to 1920, deponent attended the University of Pennsylvania, and there engaged in the study of chemistry for a period of time.

On or about the first day of October, 1920, deponent was employed by the Electric Storage Battery Company as a chemist in the laboratory of the said company, which laboratory was housed in a building at the southeast corner of 19th Street and Allegheny Avenue, Philadelphia, Pennsylvania.

During the balance of the year 1920, and the years 1921, 1922, and up to July, 1923, while deponent was employed in said building at 19th Street and Allegheny Avenue, deponent's duties included the testing of samples of lead oxides, including red lead and litharge, and other materials used in the construction of storage batteries.

During the years 1921 and 1922, samples of so-called lead dust or grey oxide were brought into the laboratory at various intervals, and that deponent made tests of some of these samples received by the laboratory, the tests being for fineness of material.

Deponent further states that he became personally acquainted with one Clarence A. Hall, who was also in the employ of the Electric Storage Battery Company during said years, and that the deponent knew that the men who delivered the samples of lead dust or grey oxide for test purposes to the laboratory were men employed in a separate building located on the west side of 19th Street about one-half block north of Allegheny Avenue, Philadelphia, and were engaged in operating an experimental mill in said building.

Deponent was instructed not to enter said building, but personally knew that the samples of material which he tested came from the building which deponent was instructed not to enter; that it was a general instruction at the plant that no members of the testing laboratory in which deponent was employed were permitted to enter the building housing the experimental mill.

That during the year 1921, the samples of lead dust or grey oxide received by the laboratory for test purposes were not received regularly, but at varying intervals, and that during 1922 the samples for testing were received at more regular intervals by the laboratory for test purposes.

JOHN J. DEEGAN,

Sworn to and subscribed before me this 8th day of May, 1939.

HOWARD T. LONG.

Notary Public.

My commission expires April 4, 1941.

Notary Public

(Seal)

Philadelphia County, Pa.

